

APPENDIX B

PENDING CLAIMS SUBJECT TO EXAMINATION

1. A non-toxic *Pseudomonas* exotoxin A-like ("PE-like") chimeric immunogen comprising: (1) a cell recognition domain of between 10 and 1500 amino acids that binds to a cell surface receptor; (2) a translocation domain comprising an amino acid sequence substantially identical to a sequence of PE domain II sufficient to effect translocation to a cell cytosol; (3) an amino acid sequence encoding an endoplasmic reticulum ("ER") retention domain that comprises an ER retention sequence, (4) an epitope presenting domain located in between the translocation domain and ER retention domain comprising (i) an amino acid sequence of between 5 and 350 amino acids that encodes an epitope non-native to PE and (ii) two cysteine residues native to PE that form a cysteine-cysteine disulfide bonded loop, wherein the epitope is inserted in between the two cysteine residues.

2. The immunogen of claim 1, wherein the cell recognition domain is domain 1a of PE, the translocation domain is domain II of PE, and the ER retention domain is domain III of PE, wherein domain III lacks ADP ribosylation activity.

3. The immunogen of claim 1 wherein the cell recognition domain is domain Ia of PE.

7. The immunogen of claim 1 wherein the translocation domain comprises amino acids 280 to 364 of SEQ ID NO:2.

8. The immunogen of claim 1 wherein the translocation domain is domain II of PE.

12. The immunogen of claim 1 wherein the ER retention domain is domain III of PE, wherein domain III lacks ADP ribosylation activity.

13. The immunogen of claim 1 wherein the ER retention sequence comprises REDLK (SEQ ID NO:11), REDL (SEQ ID NO:12) or KDEL (SEQ ID NO:13).

24. A method of producing antibodies against an epitope non-native to PE, wherein the epitope exists within a cysteine-cysteine loop comprising the steps of:

(i) inoculating an animal with a non-toxic *Pseudomonas* exotoxin A-like ("PE-like") chimeric immunogen, the PE-like chimeric immunogen comprising: (1) a cell recognition domain of between 10 and 1500 amino acids that binds to a cell surface receptor; (2) a translocation domain comprising an amino acid sequence substantially identical to a sequence of PE domain II sufficient to effect translocation to a cell cytosol; (3) an amino acid sequence encoding an endoplasmic reticulum ("ER") retention domain that comprises an ER retention sequence, (4) an epitope presenting domain located in between the translocation domain and ER retention domain comprising (i) an amino acid sequence of between 5 and 350 amino acids that encodes an epitope non-native to PE and (ii) two cysteine residues native to PE that form a cysteine-cysteine disulfide bonded loop, wherein the epitope is inserted in between the two cysteine residues.

(ii) collecting antiserum

25. The method of claim 24 wherein the amino acid sequence that encodes an epitope non-native to PE consists of between about 5 and about 50 amino acids.

44. The method of claim 25, wherein the amino acid sequence that encodes an epitope non-native to PE consists of between about 15 amino acids and about 50 amino acids.

45. The method of claim 25, wherein the amino acid sequence that encodes an epitope non-native to PE consists of between about 5 and about 15 amino acids.